

Part I: Policy Overview

►Introduction

Although the European Union (EU) is not a geographically distinct region, it deserves special attention from an energy policy perspective, because it includes a governing component that does not exist in most other world regions.

The EU is an expanding political and economic alliance of countries that includes most of Western Europe and seeks to embrace further members in the near future. It has supranational legislative and executive powers, a unique arrangement. EU level law supersedes national law, although there are different degrees of constraint. However, the general principle of subsidiarity applies, which stipulates that all matters should be settled at the level where regulation is most effective, meaning, at the lowest administrative level. Accordingly, this report gives the reader an overview of the most important recent EU level policies and discussions relevant to energy

Naturally, reporting developments and trends on a regional level will necessarily hide the national particularities, trends and policies. In order not to completely smooth over the different national circumstances in the fifteen EU Member States, this report also looks at some of the specific events and decisions at country level in a separate section in order to highlight some of these singularities which would otherwise go missing.

► General Discussion

The European Union is a political entity that brings together fifteen countries of different size, geography, economic structure and language. These are (in alphabetical order): Austria, Belgium, Denmark, Germany, Greece, Finland, France, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.²

These countries together cover a land area of 3.24 million square kilometres (9 times as big as Japan, but only a good third of the size of the United States)³. It ranges from the snow-rich Scandinavian North to the sunny Mediterranean coast. Its 375 million inhabitants represent just around six percent of world population, but nearly a fifth of world economic activity measured in GDP PPP⁴. Every European citizen emits more than twice the amount of carbon dioxide, the most important greenhouse gas, than the world average.

Economic activity

The economies of all fifteen Member States together grew by around 40% between 1990 and 2000. While annual growth was between 1 and 2 % in the first half of the decade, it picked up pace in the second half⁵ and saw increases of over 2% from 1997 onwards, topping 3.4% in 2000.

In terms of employment, the 1990s saw a continuing trend of sectoral shift away from agriculture and industry to services. The European economy is now based strongly on the provision of services. In 1999, two-thirds of employment was in this sector. The other major share is industry with just under 30%. Agriculture gives employment to less than 5% of people. Unemployment decreased by a fourth between 1997 and 2000, as levels fell in the latter half of the 1990s from over 10.6 to 8.3% on average.

In 1992 the European Internal Market was created, which lifted a number of trade barriers that still existed between EU countries. This has intensified economic exchange between them. A good sixty percent of all imports and exports of these countries takes place among the 15 Member States, a further 10% with other Western European countries under the European Free Trade Agreement (EFTA) and around 6% with the Central and Eastern European countries that are preparing to join the EU in the near future, leaving just a quarter of total trade with the rest of the world.

Energy production and consumption

The fifteen EU member countries have very different energy market structures. While France, for example, derives over three-quarters of its electricity from nuclear power (and exports some of it), this energy form is banned in Denmark and Italy, and being phased-out in Germany, Sweden and Belgium. Austria on the other hand has a considerable share of hydro power to supply the country's electricity, Denmark is a pioneer in wind energy, and Germany now sports the world's largest amount of installed wind power capacity.

² Austria, Finland and Sweden joined in 1995. All EU level figures prior to this date which are used in this report include all fifteen Member States.

³ Figures in this introductory chapter are from the EU Commission's 'EU energy and transport in figures 2001', unless otherwise indicated.

⁴ GDP= gross domestic product , PPP= purchasing power parity

⁵ Economic data 1990-1998 from Annual Energy Review 2000

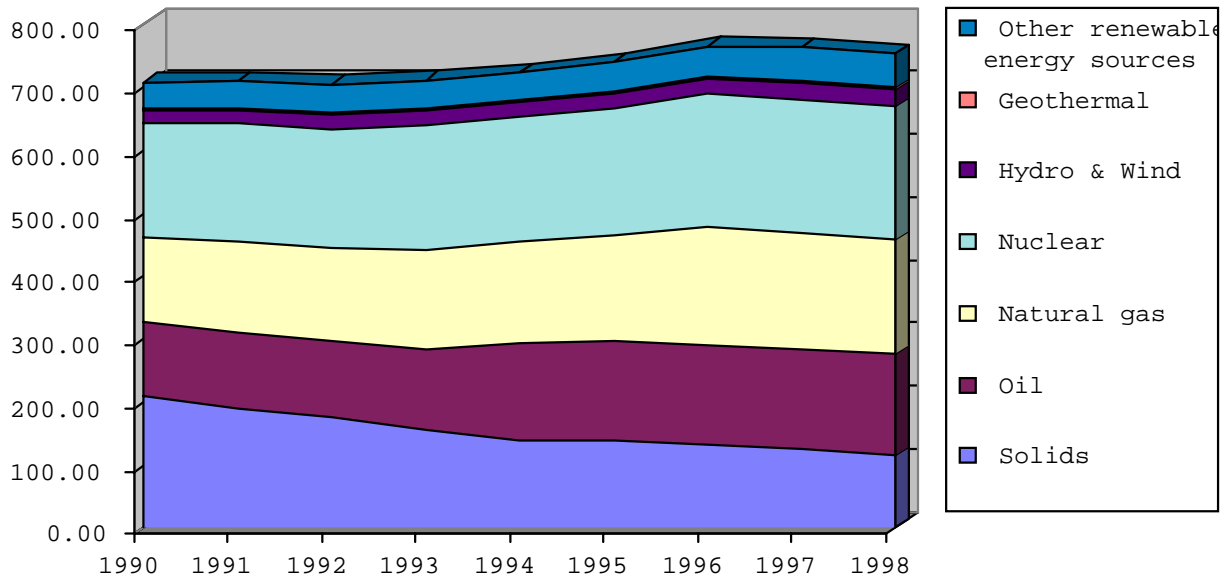
Nevertheless, fossil fuels such as coal, oil and natural gas continue to dominate the EU's energy supply. Despite considerable domestic production, an increasing majority of these have to be imported and the EU's energy import dependency is growing. This is mainly due to an increase in overall consumption beyond the growth in domestic production and changes in the fuel mix (see Figures 1 and 2 below).

Between 1990 and 1999, primary energy consumption rose by over 9%, while domestic production increased only by 7%, after a downward trend in the late 1980s. Coal production in particular is on the decline, in line with overall consumption of coal. The resulting gap was filled by increased use of oil and natural gas in particular. Consumption of these fuels rose by 1.2% (oil) and 4.5% (gas), respectively, each year between 1990 and 1998. The level of electricity generated from nuclear power plants also increased by over 2% annually during the same period (mostly from existing reactors), making up for over one third of the overall increase of 15% in electricity consumption- twice the increase in electricity from hydro and wind power. At present, only one additional nuclear plant is under construction (in France), although Finland is considering giving a license for a fifth reactor.

Wind power is not only the fastest growing source of energy world-wide, but it is reaching new record levels particularly due to its dynamic growth in Europe. In 2001, generating capacity reached 17,300 MW, an increase of 35% in one year.

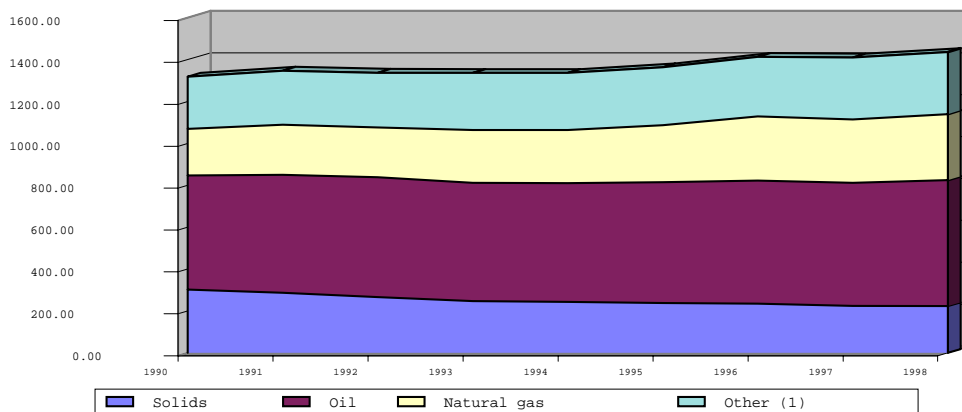
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Figure 1: Primary Energy Production in the EU 1990-1998



Source: Annual Energy Review 2000

Figure 2: Gross Inland Consumption (GIC) in the EU 1990-1998



(1) Other includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

Source: Annual Energy Review 2000